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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/188,190	11/10/1998	KATSUNORI KANEKO	1472-177P	4015

2292            7590            03/28/2002

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[REDACTED] EXAMINER

NGUYEN, TU MINH

ART UNIT	PAPER NUMBER
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3748

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DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No. <b>09/188,190</b>	Applicant(s) <b>Kaneko et al.</b>
Examiner <b>Tu M. Nguyen</b>	Art Unit <b>3748</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED Mar 20, 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

Therefore, further action by the applicant is required to avoid the abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**THE PERIOD FOR REPLY [check only a) or b)]**

- a)  The period for reply expires 3 months from the mailing date of the final rejection.
- b)  In view of the early submission of the proposed reply (within two months as set forth in MPEP § 706.07 (f)), the period for reply expires on the mailing date of this Advisory Action, OR continues to run from the mailing date of the final rejection, whichever is later. In no event, however, will the statutory period for the reply expire later than SIX MONTHS from the mailing date of the final rejection.

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1.  A Notice of Appeal was filed on \_\_\_\_\_ . Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2.  The proposed amendment(s) will be entered upon the timely submission of a Notice of Appeal and Appeal Brief with requisite fees.
3.  The proposed amendment(s) will not be entered because:
- they raise new issues that would require further consideration and/or search. (See NOTE below);
  - they raise the issue of new matter. (See NOTE below);
  - they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

4.  Applicant's reply has overcome the following rejection(s):  
\_\_\_\_\_  
\_\_\_\_\_
5.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claim(s).
6.  The a)  affidavit, b)  exhibit, or c)  request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
see the ATTACHMENT
7.  The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
8.  For purposes of Appeal, the status of the claim(s) is as follows (see attached written explanation, if any):  
Claim(s) allowed: \_\_\_\_\_  
Claim(s) objected to: \_\_\_\_\_  
Claim(s) rejected: 1-14
9.  The proposed drawing correction filed on Aug 25, 2000  has  has not been approved by the Examiner.
10.  Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
11.  Other:

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**ATTACHMENT**

***Response to Arguments***

1. Applicant's arguments with respect to the references applied in the previous Office Action have been fully considered but they are not persuasive.

In response to applicant's argument that Hepburn et al. fail to disclose that the purifying means (32) has a function of a three-way catalyst (pages 4 and 5 of Applicant's Amendment), the examiner respectfully disagrees.

The definition of a three-way catalyst is a device having an ability to eliminate the three harmful emissions, namely NOx, HC, and CO, in the exhaust gas when the exhaust gas is at stoichiometric or fuel rich condition. The purifying means (32) of Hepburn et al. stores the NOx from the exhaust gas during a fuel lean operation; and releases and reduces the stored NOx during a stoichiometric or fuel rich operation (lines 13-18 of column 1). During the reduction of NOx, the HC and CO in the exhaust gas are chemically reacted with NOx to form the benign products of water, nitrogen, and carbon dioxide. Therefore, the purifying means of Hepburn et al. demonstrates the ability to eliminate NOx, HC, and CO in the exhaust gas when the exhaust gas is at stoichiometric or fuel rich condition and thus, clearly has a function of a three-way catalyst.

In response to applicant's argument that the examiner is relying only on a "possibility" or a "probability" in the use of Hepburn et al. to make a 102 rejection, the examiner again respectfully disagrees. Specifically, applicant argues that the statement "This (the absorbing of SOx in the

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purifying means (32)) clearly causes a reduction in NOx conversion efficiency of the purifying means (32)" is not understood (page 6 of Applicant's Amendment). This statement is fully supported by the disclosure in Hepburn et al. As stated on lines 23-25 of column 1 and lines 64-67 of column 2, Hepburn et al. clearly state that sulfur is a contaminant; and an accumulation of sulfur in a NOx trap causes a decrease in the NOx trapping efficiency and the ultimate conversion of NOx within the trap.

Applicant further argues that the statement "The mechanism of purging and reduction of sulfates stored in the purifying means is similar to the three-way catalytic purging and reduction of nitrates" is not consistent with a rejection under 102 (page 7 of Applicant's Amendment). The examiner again respectfully disagrees with this argument. Again, this statement is also fully supported by Hepburn et al. On lines 13-18 of column 1, Hepburn et al. state that NOx can be desorbed and reduced from the trap at a temperature window between 300°C and 400°C. On lines 26-27 of column 1, they state that sulfur can be desorbed from the trap at a temperature greater than 675°C. Thus, except for the operating temperature of each compound, the mechanism of eliminating sulfur from the trap is similar to that of NOx.

With regard to Applicant's argument to the alleged "improper" use "design choice" in the 103(a) rejections of dependent claims 3, 4, 6, and 7 (pages 8 and 10 of Applicant's Amendment), the examiner again firmly maintains the rejection and the response to argument as outlined in the Final Rejection.

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*Communication*

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623. The fax phone number for this group is (703) 308-7763.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

*Tu M. Nguyen*

TMN

Tu M. Nguyen

March 27, 2002

Patent Examiner

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